EXHIBIT 30

ATTACHMENT 30

HIGHLY CONFIDENTIAL - ATTORNEYS' EYES ONLY

1   UNITED STATES DISTRICT COURT

2   NORTHERN DISTRICT OF CALIFORNIA

3   SAN JOSE DIVISION

4

CISCO SYSTEMS, INC.   Case No.: 5:14-cv-05344-BLF(PSG)

5

                 Plaintiff,

6

      v.

7

ARISTA NETWORKS, INC.

8

              Defendants.

9 _____

10

11

12

13   * HIGHLY CONFIDENTIAL - ATTORNEYS' EYES ONLY *

14   VIDEOTAPED DEPOSITION OF KIRK LOUGHEED

15   Palo Alto, California

16   Monday, April 4, 2016

17   Volume 2

18

19

20

21 Reported by:

22 LESLIE JOHNSON

23 RPR, CSR No. 11451

24 Job No.: 2285024

25 PAGES 190 - 399

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HIGHLY CONFIDENTIAL - ATTORNEYS' EYES ONLY

1   UNITED STATES DISTRICT COURT
2   FOR THE NORTHERN DISTRICT OF CALIFORNIA
3   SAN JOSE DIVISION
4
    CISCO SYSTEMS, INC.   Case No.: 5:14-cv-05344-BLF(PSG)
5
        Plaintiff,
6
    v.
7
    ARISTA NETWORKS, INC.
8
        Defendants.
9   _____
10
11
12
13
14   * HIGHLY CONFIDENTIAL - ATTORNEYS' EYES ONLY *
15
16
17   VIDEOTAPED DEPOSITION OF KIRK LOUGHEED, Volume 2,
18   taken on behalf of Defendant, at 601 California Avenue,
19   Palo Alto, California, beginning at 9:25 a.m. and ending
20   at 4:37 p.m., on Monday, April 4, 2016, before
21   LESLIE JOHNSON, Certified Shorthand Reporter No. 11451.
22
23
24
25
                                        Page 191

1   APPEARANCES:
2
3   FOR PLAINTIFF CISCO SYSTEMS, INC.:
4   QUINN EMANUEL URQUHART & SULLIVAN LLP
5   BY: JOHN (JAY) NEUKOM, ESQ.
6   50 California Street, 22nd Floor
7   San Francisco, California 94111
8   (415)875-6600
9   johnneukom@quinnemanuel.com
10 FOR DEFENDANT ARISTA NETWORKS, INC.:
11   KEKER & VAN NEST LLP
12   BY: RYAN WONG, ESQ.
13   633 Battery Street
14   San Francisco, California 94111
15   (415)391-5400
16   rwong@kvn.com
17 ALSO PRESENT:
18   SEAN GRANT, Videographer
19
20
21
22
23
24
25
                                        Page 192

1   I N D E X
2
3   WITNESS   EXAMINATION
4   KIRK LOUGHEED
    Volume 2
5
6   BY MR. WONG   197
7
8   EXHIBITS
9   KIRK LOUGHEED
10 NUMBER   DESCRIPTION   PAGE
11 Exhibit 452   Copy of name badge; 1 page   198
12 Exhibit 453   Black and white copy of photograph;   198
        1 page
13
    Exhibit 454   Patent Agreement; Bates stamped   208
14   KL-00000872 to 891
15 Exhibit 455   A Multiple Protocol Kernel for   228
        Local Area Network Software
16   Development Reference Manual; Bates
        stamped KL-00000001 to 93
17
    Exhibit 456   Document entitled "Chaosnet"; Bates   238
18   stamped KL-00000186 to 250
19 Exhibit 457   Document entitled "Debugging   241
        Information"; Bates stamped
20   KL-00000564-654
21 Exhibit 458   DECnet Digital Network Architecture   244
        (Phase V); Bates stamped
22   KL-00000251 to 380
23 Exhibit 459   E-mail from Stanford Low Overhead   252
        Timesharing; Bates stamped
24   KL-00001699 to 763
25
                                        Page 193

1   EXHIBITS (Cont.)
2   KIRK LOUGHEED
3   NUMBER   DESCRIPTION   PAGE
4   Exhibit 460   E-mail dated 10-Jan-83 from Barb   260
        at ISL to Computer Committee; Bates
5   stamped KL-00000868 to 871
6   Exhibit 461   Stanford Ethertip/Gateway User and   263
        Configuration Guide; Bates stamped
7   CSI-CLI-01315367 to 97
8   Exhibit 462   Letter dated August 21, 1986 from   281
        Robert L. Street to Len Bosack;
9   Bates stamped CSI-CLI-01839502
        to 504
10
    Exhibit 463   E-mail dated 4/3/2006 from Kirk   298
11   Lougheed to Vivian Neou; Bates
        stamped CSI-CLI-01124245
12
    Exhibit 464   Cisco's Amended Exhibit F; 44 pages   302
13
    Exhibit 465   Software Unit External Functional   310
14   Specification; Bates stamped
        CSI-CLI-00608751 to 752
15
    Exhibit 466   ipsupport.c -- miscellaneous IP   328
16   support code; 20 pages
17 Exhibit 467   Document entitled "Part 3: Media   332
        Access Control (MAC) Bridges";
18   Bates stamped ARISTANDCA00032440
        to 812
19
    Exhibit 468   Contents of "tip" directory; 1 page   348
20
    Exhibit 469   Command1.c -- ASM/AGS commands;   355
21   Bates stamped KL-SC-00000001 to 9
22 Exhibit 470   Config.c -- parse and act upon   358
        configuration commands; Bates
23   stamped KL-SC-00000010 to 20
24 Exhibit 471   Exec.c -- ASM/AGS command level;   365
        Bates stamped KL-SC-00000021 to 32
25
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                              2 (Pages 191 - 194)

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1              EXHIBITS (Cont.)
2              KIRK LOUGHEED
3  NUMBER          DESCRIPTION           PAGE
4  Exhibit 472  "cisco.c" source code; 1 page    371
5  Exhibit 473  "stanford.c" source code; 1 page  371
6  Exhibit 474  Source code; Bates stamped    375
                KL-SC-00000033 to 41
7
   Exhibit 475  Source code; Bates stamped    375
8               KL-SC-00000042 to 52
9  Exhibit 476  Cisco Systems ASM/AGS User Manual  383
                and Configuration Guide; Bates
10              stamped CSI-CLI-00358622 to 54
11                    * * *
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1    Palo Alto, California, Monday, April 4, 2016
2            9:25 a.m.
3
4       THE VIDEOGRAPHER: Good morning. We're on
5  the record. The time is 9:25 a.m., and the date is
6  April 4th, 2016. This begins Volume 2 of the
7  videotaped deposition of Mr. Kirk Lougheed. My name
8  is Sean Grant, here with our court reporter, Leslie
9  Johnson. We're here from Veritext Legal Solutions
10 at the request of counsel for Defendant. This
11 deposition is being held at Wilson Sonsini in Palo
12 Alto, California. The caption of this case is
13 "Cisco Systems Inc. versus Arista Networks Inc.,"
14 Case No. 5:14-cv-05344-BLF.
15      Please note that audio and video recording
16 will take place unless all parties have agreed to go
17 off the record. Microphones are sensitive and may
18 pick up whispers, private conversations or cellular
19 interference.
20      At this time, will counsel please identify
21 themselves and state whom they represent.
22      MR. WONG: Ryan Wong from Keker & Van Nest
23 for Defendant Arista Networks.
24      MR. NEUKOM: John Neukom for the plaintiff
25 and also today for the witness.
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1       THE VIDEOGRAPHER: Thank you. Will the
2  certified court reporter please swear in the
3  witness.
4
5           KIRK LOUGHEED,
6  having been administered an oath, was examined and
7           testified as follows:
8
9        EXAMINATION (RESUMED)
10 BY MR. WONG:
11    Q. Good morning, Mr. Lougheed.
12    A. Good morning.
13    Q. Mr. Lougheed, do you understand that this
14 is a continuation of your personal deposition that
15 was taken back on November 20th, 2015?
16    A. I do.
17    Q. And do you understand that you are still
18 testifying under oath as if you were testifying at
19 trial?
20    A. I do.
21    Q. And is there any reason why you cannot
22 give full and truthful testimony today?
23    A. There is no reason.
24    Q. And are you generally still familiar with
25 the ground rules for a deposition?
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1    A. Yes.
2    Q. Okay. Well, I'll just repeat some of the
3  more important rules. If you need to take a break
4  at any time, just let me know. And all I'd ask is
5  that if there is a question pending, that you answer
6  it before we go on the break. Okay?
7    A. (Witness nods head.)
8       MR. WONG: Why don't we mark this as the
9  first exhibit for today.
10      (Exhibit 452 marked for identification.)
11      MR. WONG: And we will mark this one as
12 the next exhibit.
13      (Exhibit 453 marked for identification.)
14      MR. NEUKOM: Ryan, I have two separate
15 pieces of paper. Are you treating these as two
16 separate exhibits?
17      MR. WONG: Yes. I'm going to give them
18 two exhibit numbers and read them into the record in
19 just a second.
20      The court reporter has marked as
21 Exhibit 452 a photocopy -- photo bearing Bates Nos.
22 KL-00002202. The court reporter has also marked as
23 Exhibit 453, a black and white photo with Bates Nos.
24 KL-00002201.
25 ////
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3 (Pages 195 - 198)

HIGHLY CONFIDENTIAL - ATTORNEYS' EYES ONLY

1   A. A type of computer manufactured by the
2 Digital Equipment Corporation.
3   Q. And Digital Equipment Corporation is also
4 known as DEC, right?
5   A. Correct.
6   Q. And did you work with these DEC VAX
7 super-minicomputers while an employee at Stanford?
8   A. One of the -- actually, at least two of
9 the systems programmers were the ones that were
10 primarily responsible for making sure that those
11 systems ran properly.
12   Q. Was Mr. Satz one of those systems
13 programmers that --
14   A. Yes.
15   Q. -- worked with the VAX system?
16   A. Yes.
17   Q. Is the answer the same for the VAX-11/750
18 super-minicomputers?
19   A. Yes.
20   Q. Did those VAX machines have a command-line
21 interface?
22   MR. NEUKOM: Objection. Vague.
23 BY MR. WONG:
24   Q. Did the VAX-11/780 systems have a
25 command-line interface?

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1   Q. And the first full sentence of that bullet
2 point says, "Supervised a computer science
3 department electronics design engineer in the
4 hardware debugging of a DEC-20 to ethernet
5 interface."
6   The next sentence says, "I also wrote the
7 interface's control microcode, the hardware
8 diagnostics, and the operating system support for
9 the device."
10   Do you see that?
11   A. I do.
12   Q. Is that referring to the EtherTIP
13 software?
14   A. No.
15   Q. What is that referring to?
16   A. That's referring to the Massbus-Ethernet
17 Interface Subsystem.
18   Q. And that's also reflected with the acronym
19 MEIS, correct?
20   A. Yes.
21   Q. Did Cisco use any of the software for the
22 MEIS?
23   A. No.
24   Q. Can you go to the page ending with Bates
25 No. 888 in Exhibit 454.

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1   MR. NEUKOM: Objection. Vague.
2   THE WITNESS: Yes.
3 BY MR. WONG:
4   Q. Were you familiar with how the VAX
5 command-line interface operated?
6   A. VAX is the name of a piece of hardware
7 that would run an operating system.
8   Q. Thank you.
9   What is the operating system that the VAX
10 hardware ran?
11   A. At Stanford there were two possibilities,
12 something called VAX VMS, and there was also
13 Berkeley UNIX.
14   Q. Is Berkeley UNIX the same as BSD?
15   A. Yes.
16   Q. Were you familiar with the VAX VMS
17 command-line interface?
18   A. No.
19   Q. Were you familiar with the Berkeley UNIX
20 command-line interface?
21   A. Yes.
22   Q. The last bullet point on the page ending
23 in 886 of Exhibit 454, do you see that? It starts
24 with "Supervised a computer science department."
25   A. Yes, I see that paragraph.

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1   A. Uh-huh. Yes. I'm on that page.
2   Q. The first bullet point, or I guess the
3 only bullet point on this page starts with "Acted as
4 Stanford contact."
5   Do you see that?
6   A. Yes, I see that paragraph.
7   Q. Is it true that you acted as Stanford
8 contact with DEC for field testing of two new
9 releases of the DEC-20 operating system?
10   A. Let me finish the paragraph so I can
11 establish context.
12   Q. Sure. Please take your time.
13   A. Okay. I've read the paragraph. Your
14 question is?
15   Q. Is it true you that you acted as the
16 Stanford contact with Digital Equipment Corporation
17 for field testing two new releases of the DEC-20
18 operating system?
19   A. Yes.
20   Q. Is the DEC 20 operating system the same
21 thing as the TOPS-20 operating system?
22   A. Yes.
23   Q. Further down on this same page ending with
24 control numbers 888 on Exhibit 454, there's a
25 section called "Special Skills Knowledge or Training

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10 (Pages 223 - 226)

HIGHLY CONFIDENTIAL - ATTORNEYS' EYES ONLY

1 Required Including Tools or Equipment Used."
2   Do you see that?
3   A. I see that.
4   Q. And one sentence underneath that heading
5 says "Familiarity with the hardware and protocols
6 used in local area networks in (ethernet) and
7 long-haul national networks (ARPANET)."
8   Do you see that?
9   A. I see that sentence.
10   Q. Did I read that correctly?
11   A. You did.
12   Q. What protocols were you familiar with as
13 of May 6th, 1985 that were used in local area
14 networks?
15   A. There -- ethernet, even in 1985 had many,
16 many protocols. You could run PUP or Park Universal
17 Packet. You could run PCPIP. You could run XNS.
18 You could run -- by that time, pretty much any
19 network protocol would run on an ethernet.
20   Q. Was address resolution protocol a protocol
21 that was used in local area networks?
22   A. On ethernets, yes.
23   Q. You can put that document aside.
24   MR. WONG: Let's mark this one as
25 Exhibit 455, please.

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1   (Exhibit 455 marked for identification.)
2 BY MR. WONG:
3   Q. The court reporter has marked as
4 Exhibit 455 a document bearing control numbers KL
5 00000001 to 93.
6   Mr. Lougheed, do you recognize the
7 document marked as Exhibit 455?
8   A. I recognize what it is. I don't believe I
9 have read it before.
10   Q. Okay. You say you recognize what it is.
11 What is the document marked as Exhibit 455?
12   A. It appears to be a reference manual for
13 Bill Yaeger's software that he developed under the
14 SUMEX project.
15   Q. And this was produced from your personal
16 files, correct, Exhibit 455?
17   A. Yes.
18   Q. Why did you have the document marked as
19 Exhibit 455 in your personal files?
20   A. It seemed to me to be of -- whenever I
21 obtained it, it seemed to me to be of at least
22 historical interest.
23   Q. Would you have obtained the document
24 marked as Exhibit 455 before you left Stanford in
25 July of 1986?

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1   MR. NEUKOM: Objection. The question is
2 phrased in the hypothetical.
3   MR. WONG: Let me rephrase the question so
4 it's not hypothetical.
5 BY MR. WONG:
6   Q. Did you obtain the document marked as
7 Exhibit 455 before you left Stanford in July of
8 1986?
9   A. I believe so.
10   Q. Do you remember if you obtained the
11 document marked as Exhibit 455 directly from
12 Mr. Yaeger?
13   A. I have no memory of now I actually
14 obtained this document.
15   Q. Were documents -- strike that.
16   Was the document marked as Exhibit 455
17 available for you to get, besides going directly
18 through Mr. Yaeger?
19   MR. NEUKOM: Objection. Vague.
20   THE WITNESS: I don't have a memory of how
21 I actually obtained it. I -- these -- such
22 documents were certainly easily obtainable at
23 Stanford University.
24 BY MR. WONG:
25   Q. When you say such documents like

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1 Exhibit 455 were easily obtainable at Stanford
2 University, how were these documents easily
3 obtainable?
4   A. It was a community where -- it was a
5 research community where research reports, if you
6 wanted them, you could -- you could ask around for
7 them.
8   Q. Now, you said you weren't sure if you had
9 read the document marked as Exhibit 455, correct?
10   A. I have no --
11   MR. NEUKOM: Objection. Misstates prior
12 testimony.
13   THE WITNESS: I have no memory of reading
14 this before. I may have. I may not have. I have
15 no memory.
16 BY MR. WONG:
17   Q. Were you familiar with the functionality
18 of the SUMEX software that Mr. Yaeger wrote while at
19 Stanford?
20   A. Yes.
21   Q. Were you familiar with how the command
22 parser worked in the SUMEX software that Mr. Yaeger
23 wrote?
24   A. At one point I certainly was.
25   Q. Were you familiar with how the command

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11 (Pages 227 - 230)

1   Q. And was Exhibit 456 a document that was in
2 your personal files?
3   A. Yes, it was.
4   Q. Okay. And why did you have this CHAOS net
5 document marked as Exhibit 456 in your personal
6 files?
7   A. Because in 1987, at the request of some
8 customers, we added CHAOS net to the Cisco router
9 software. A consultant named Eric Weaver actually
10 did the -- I believe it was Eric Weaver did the
11 actual implementation in the Cisco software. He was
12 a contractor for us.
13   Q. Okay. So your possession of the document
14 marked as Exhibit 456 was in connection with work
15 that Cisco did with respect to CHAOS net?
16   A. Correct. I suspect this was the document
17 I handed him to say I want this in the router.
18   Q. Did you ever read the document marked as
19 Exhibit 456 before you handed it to Mr. Weaver?
20   A. I may have.
21   Q. Can you turn to page 17 of Exhibit 456.
22 The control number at the bottom ends in 206. Let
23 me know when you're there, please.
24   A. Okay. I'm on page -- page 17 of the CHAOS
25 net document.

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1   Q. Did you come up with the term "flow
2 control"?
3   A. No. You're doing a bit of random word
4 matching.
5   Q. Yes. Random questioning is definitely my
6 style.
7   You can set that document aside.
8   MR. WONG: Let's mark this one as the next
9 exhibit, please.
10   (Exhibit 457 marked for identification.)
11 BY MR. WONG:
12   Q. The court reporter has marked as
13 Exhibit 457 a document bearing control numbers
14 KL-00000564 to 654.
15   And Mr. Lougheed, take your time to look
16 at Exhibit 457. But my question to you is, do you
17 recognize the document marked as Exhibit 457?
18   A. There is no title to this document, other
19 than Chapter 1. It appears to be -- have to do with
20 DEC-20 hardware. So I don't -- I do not recognize
21 where this document came from.
22   Q. Okay. I'll represent to you that this
23 document was produced to us without a cover page.
24 So this is -- this is the document that was produced
25 to us.

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1   Q. And the first -- strike that. At the top
2 of this page ending in control numbers 206 of
3 Exhibit 456, it says "3.8 Flow and Error Control."
4   Do you see that?
5   A. Yes.
6   Q. Do you understand what flow control is,
7 Mr. Lougheed?
8   A. In a general sense.
9   Q. Can you please explain to me what flow
10 control means in a general sense.
11   A. How you put packets onto the network and
12 what speed, rate that you -- and under what
13 conditions you put the packets onto the network.
14 That's my general understanding. I'm not sure --
15 every protocol has its own nuances, so -- and I have
16 not read the rest of this page, so . . .
17   Q. Understood.
18   When you say every protocol has its own
19 nuances, do you mean that every protocol has its own
20 nuances for flow control?
21   A. Pretty much.
22   Q. When was -- strike that.
23   Do you know when the term "flow control"
24 was first used in the networking industry?
25   A. No.

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1   Do you have any doubt that this document
2 was in your personal files that you handed over to
3 Cisco's counsel?
4   A. I don't doubt that.
5   Q. Do you know when you came into possession
6 of the TOPS-20 document marked as Exhibit 457?
7   A. Probably while I was working at Stanford,
8 if this indeed came from the contents of the boxes
9 in my garage.
10   Q. Mr. Lougheed, did you give the documents
11 that were in your garage to your counsel after the
12 first deposition took place?
13   A. There were -- yes.
14   Q. Was there anything else besides documents
15 that were stored in your garage that you provided to
16 your counsel after the first deposition of you?
17 Anything besides paper documents that you found in
18 your garage? Did you provide any other documents to
19 your counsel after your first deposition?
20   A. Just paper documents.
21   Q. Did you have -- strike that.
22   While you were working at Stanford and
23 before you left to join Cisco in July of 1986, did
24 you have TOPS-20 user manuals in your possession?
25   MR. NEUKOM: Objection. Vague.

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14 (Pages 239 - 242)

HIGHLY CONFIDENTIAL - ATTORNEYS' EYES ONLY

1   A. Yes.
2   Q. Do you know when a spanning tree is?
3   A. Yes, I do.
4   Q. What is a spanning tree?
5   A. A spanning tree is a --
6   MR. NEUKOM: Objection. Calls for
7 opinion.
8   THE WITNESS: It's a graph imposed on the
9 network to ensure that packets that are being
10 bridged do not get into loops as they are being
11 transmitted by bridges.
12 BY MR. WONG:
13   Q. And is that the function that is served by
14 a spanning tree?
15   MR. NEUKOM: Objection. Calls for opinion
16 testimony, and the question is phrased in the
17 hypothetical or abstract.
18 BY MR. WONG:
19   Q. Let me ask the question differently,
20 Mr. Lougheed.
21   What is the function served by a spanning
22 tree?
23   MR. NEUKOM: Same objections.
24   THE WITNESS: The spanning tree is
25 essentially a data structure -- in effect is a data

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1 structure that allows bridges and other things that
2 forward at the MAC layer -- it tells them which
3 ports they should not forward packets on.
4 BY MR. WONG:
5   Q. When did first hear of the term "spanning
6 tree"?
7   A. During my -- during Cisco. Probably late
8 '80s.
9   Q. You can set that document aside.
10   MR. WONG: Let's have that marked as the
11 next exhibit, please.
12   (Exhibit 459 marked for identification.)
13 BY MR. WONG:
14   Q. The court reporter has marked as
15 Exhibit 459 a document bearing control numbers
16 KL-00001699 to 1763.
17   Mr. Lougheed, please take a moment to look
18 at Exhibit 459 and let me know -- well, and my first
19 question to you will be, do you recognize
20 Exhibit 459?
21   A. Yes.
22   Q. And what is Exhibit 459?
23   A. It's a computer listing of my e-mail while
24 I was working at the Stanford low overhead
25 time-sharing.

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1   Q. And the Stanford low overhead
2 time-sharing, is that also -- does that also use the
3 acronym LOTS?
4   A. Yes.
5   Q. If you turn to the first page of
6 Exhibit 459, the Bates number ends in 1700. Let me
7 know when you're there.
8   A. Okay.
9   Q. There is a -- I guess this is an e-mail at
10 the top of the page ending in Bates Nos. 1700,
11 correct? Is that an e-mail at the top of the page
12 ending in Bates No. 1700?
13   A. Yeah.
14   Q. And there's a CC there to b.bombadil? Do
15 you see that?
16   A. Right.
17   Q. Is that your e-mail address?
18   A. That was my -- that was my user ID at the
19 LOTS computer facility.
20   Q. Okay. So where "b.bombadil" appears in
21 Exhibit 459, that is your user ID, correct?
22   A. Correct.
23   Q. What does the "B" stand for for the
24 b.bombadil?
25   A. So in the -- in 1976, when they set up the

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1 student computing facility, they needed to support
2 several thousand users, and the operating system had
3 a limitation that it could only support some number
4 smaller than the total number of students. So what
5 they did was they created top level directories A
6 through Z, and then the dot indicates that there is
7 a subdirectory or, you know, a subuser of that. So
8 everybody's user ID had the initial letter, dot
9 username.
10   Q. Understood. I was wondering why it wasn't
11 T. Bombadil. But I'm assuming the Bombidel refers
12 to --
13   A. The Tolkien character.
14   Q. Yes.
15   THE REPORTER: To what character?
16   THE WITNESS: Tolkien. As in Lord of the
17 Rings. Or actually, as in the Hobbit. No.
18 Actually, it's Lord of the Rings.
19 BY MR. WONG:
20   Q. I think it's Lord of the Rings.
21   A. What can I say? I was an undergraduate.
22 I was stuck with that same username.
23   Q. I would have chosen Radagast.
24   Are you aware of the e-mail alias at Cisco
25 called Clueless@Cisco.com?

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17 (Pages 251 - 254)

1 commands?
2   A. To show the commands that required
3 privileges.
4   Q. Can you turn to the page of Exhibit 459
5 ending in Bates No. 1737.
6   A. Okay. I'm at 1737.
7   Q. There is an e-mail near the bottom of the
8 page that starts with the text "For some reason."
9   Do you see that?
10   A. Uh-huh.
11   Q. And that whole sentence says -- strike
12 that.
13   That e-mail was sent by you, correct?
14   A. That's what it looks like.

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23   Q. You can put that aside.
24   MR. WONG: Let's mark this as 460, please.
25   (Exhibit 460 marked for identification.)

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1 BY MR. WONG:
2   Q. The court reporter has marked as
3 Exhibit 460 a document with control numbers
4 KL-00000868 to 871.
5   Mr. Lougheed, please take a moment to look
6 at Exhibit 460. But my first question to you is, do
7 you recognize the documents marked as Exhibit 460?
8   A. Okay. I've examined the documents.
9   Q. Do you recognize the documents marked as
10 Exhibit 460?
11   A. I do.
12   Q. What are the documents marked as
13 Exhibit 460?
14   A. One is an e-mail entitled "Notes on the
15 computer committee meeting of January 7th, 1983"
16 discussing the setting up of the electrical
17 engineering computer facility.

23 in my testimony, that I had forked for Cisco.
24   Q. Just so the record is clear, the
25 resignation letter that you tendered to Mr. Hansen

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1 is the document ending in control numbers 870,
2 correct?
3   A. Correct.
4   Q. And the memo from Mr. Hansen to you is the
5 document ending in Bates Nos. 871, correct?
6   A. Correct.
7   Q. All right. And the e-mail to the computer
8 committee that you mentioned is the document with
9 control numbers 868 to 869, correct?
10   A. Right. Correct.
11   Q. Looking at the e-mail on the page with
12 control numbers 868 on Exhibit 460.
13   A. Uh-huh.
14   Q. About close to halfway down, there is a
15 paragraph that starts with the word "name."
16   Do you see that?
17   A. Yes, I see that paragraph.
18   Q. And it says "Name. A competition was
19 announced on B-Board. Of several names and
20 acronyms, SIERRA (suggested by Nowicki) seemed to
21 gather the most favor."
22   Do you see that?
23   A. I see that.
24   Q. What is that naming competition for?
25   A. So earlier, the department of computer

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19 (Pages 259 - 262)

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1 BY MR. WONG:
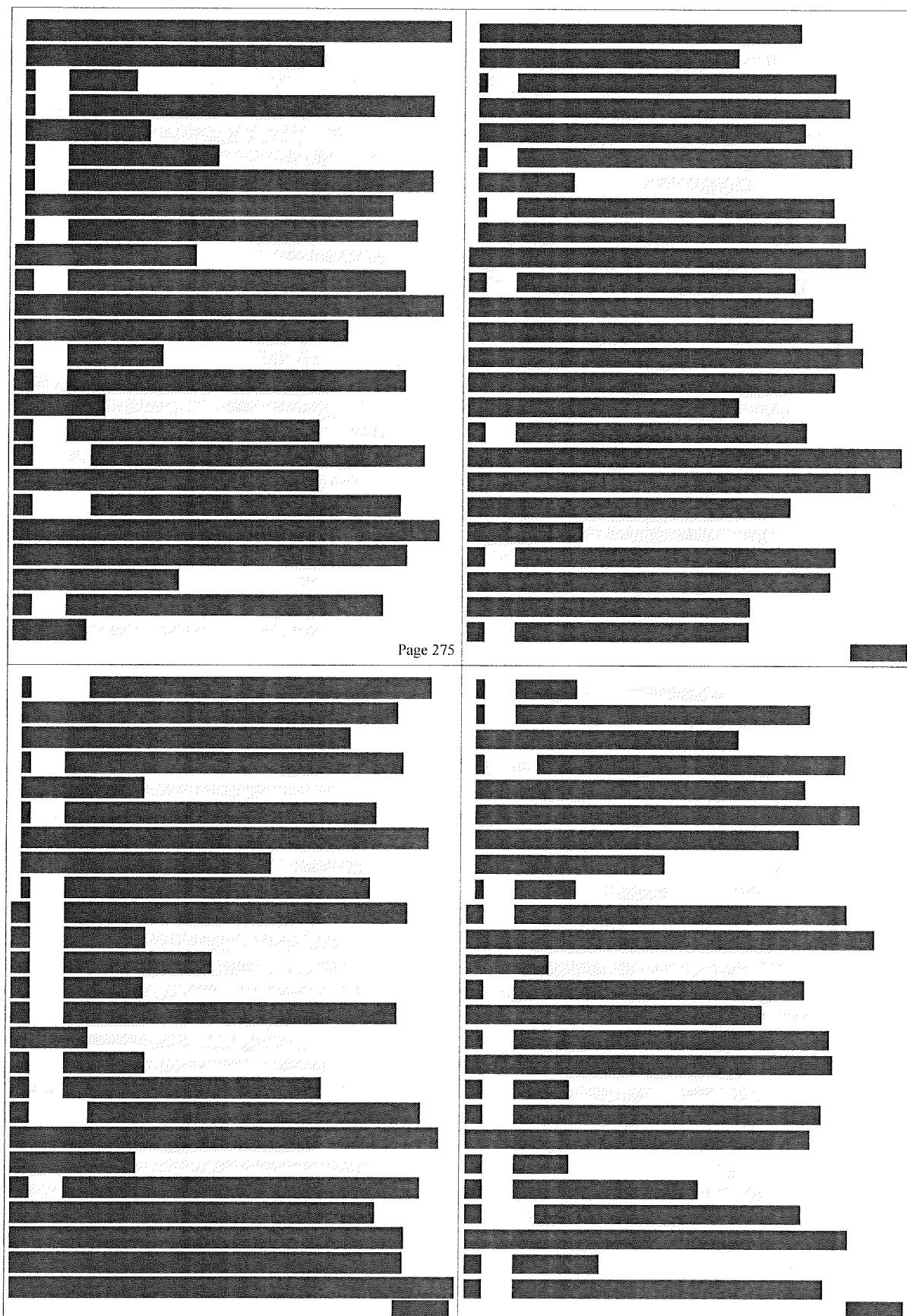2   Q. Can you turn back to Exhibit 460, please?
3   A. Yes.

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21 (Pages 267 - 270)

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27 (Pages 291 - 294)

2   Q. When did your opinion about copyright law
3 change from the opinion that you had in 1986?
4   A. Late '80s.
5   Q. What precipitated your change in viewpoint
6 regarding copyright law in the late '80s?
7   MR. NEUKOM: Objection. Vague.
8   THE WITNESS: Deeper understanding of the
9 issues involved and how actually -- how it was
10 treated, how it was regarded within the industry. I
11 had actually had some industry experience by that
12 time.
13 BY MR. WONG:
14   Q. Are you familiar with the Juniper JUNOS
15 operating system?
16   A. Very slightly.
17   Q. Do you understand that the JUNOS operating
18 system has a command-line interface?
19   A. Yes.
20   Q. Do you believe that the JUNOS command-line
21 interface is protected by copyright?
22   MR. NEUKOM: Objection. Calls for a legal
23 conclusion and opinion testimony right on its face.
24 BY MR. WONG:
25   Q. Please answer.

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1   A. I believe their set of command expressions
2 that form the command-line interface are indeed --
3 and I am not a lawyer, but I believe it is -- it is
4 protected intellectual property.
5   Q. Do you believe it's okay if Cisco copied
6 the JUNOS set of command expressions and used it in
7 one of their products?
8   MR. NEUKOM: Objection. This is a
9 hypothetical. It calls for a legal conclusion. It
10 calls for opinion testimony. And this witness is
11 here for his second day of deposition. This -- my
12 patience is starting to run thin with this patently,
13 patently inadmissible line of questioning.
14 BY MR. WONG:
15   Q. Please answer.
16   A. I'm sorry. What was the question again?
17   Q. Do you believe it's okay if Cisco copied
18 the JUNOS set of command expressions and used it in
19 one of Cisco's products?
20   A. It would not be proper and it would be
21 extremely stupid. I can't imagine why we would do
22 that.

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17   MR. WONG: Let's mark this one as the next
18 in order.
19   (Exhibit 463 marked for identification.)
20 BY MR. WONG:
21   Q. The court reporter has marked Exhibit 463,
22 a document bearing control number CSI-CLI-01124245.
23   Mr. Lougheed, please take a moment to look
24 at Exhibit 463 and let me know when you're done.
25   A. Okay. I've read it.

28 (Pages 295 - 298)

1 BY MR. WONG:

2   Q. Can access lists be associated with
3 different routing protocols?

4   A. Yes.

5   MR. NEUKOM: Objection. Calls for opinion
6 testimony.

7 BY MR. WONG:

8   Q. Yes, right?

9   A. We have implemented such in the past.

10   Q. What other routing protocols have -- for
11 what -- strike that.

12   For what other routing protocols have you
13 implemented access lists?

14   A. I'll have to think carefully about this.
15 XNS, Banyan VINES, I believe. I'd have to go refer
16 to the Cisco documentation, but I know that we did
17 have access lists for a number of network protocols.

18   MR. WONG: Just for the court reporter's
19 knowledge, did you say Banyan VINES?

20   THE WITNESS: Banyan VINES. B-A-N-Y-A-N,
21 and then VINES, as in --

22   MR. NEUKOM: Red vines.

23   THE WITNESS: As in red vines. Okay.

24 BY MR. WONG:

25   Q. As in a banyan tree?

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1   A. A banyan tree.

2   Q. So the "IP" word in the "ip access-group"
3 command is meant to indicate that the access groups
4 are for the IP protocol, correct?

5   A. It is an indication that that command
6 applies to the IP -- into the IP hierarchy of the
7 interface command.

8   Q. So if you were implementing access groups
9 for the XNS protocol, it would be "XNS
10 access-group," right?

11   A. Yes.

12   Q. Have you had -- strike that.

13   Did you come up with the term "access
14 group" in 1989?

15   A. That was the command expression I chose.

16   Q. Well, was it the first -- had you heard of
17 the term "access group" at the time that you added
18 this command to the Cisco IOS?

19   A. No, I hadn't. I had previously
20 implemented an "access class" command associated --
21 for associating an access list with a terminal line.
22 And I needed something to associate it with an
23 interface. And I was -- I just needed something
24 different. And that was the best I could come up
25 with that day.

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1   Q. When you added the "ip access-group"
2 command, did you consider using a different term
3 other than "IP"?

4   A. I do not recall whether we had switched
5 everything to the IP's hierarchy then. I'd have to
6 refer to the documentation to see whether or not we
7 actually had an IP hierarchy or whether we assumed
8 everything was IP.

9   Q. I understand. If there had been an IP
10 hierarchy already implemented at the time you added
11 the "ip access-group" command would you have
12 considered any other term besides "IP" in the "ip
13 access-group" command?

14   MR. NEUKOM: Objection. Calls for
15 speculation, and the question poses a hypothetical.

16   THE WITNESS: I could have perhaps
17 inverted the hierarchy. I'm sorry. The question is
18 again?

19 BY MR. WONG:

20   Q. You testified that you weren't sure
21 whether or not there had been an IP hierarchy
22 implemented at the time you added this "ip
23 access-group" command?

24   A. Right.

25   Q. Assuming you checked and there was already

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1 an IP hierarchy in existence when you added the "ip
2 access-group" command, would you have changed the
3 first word to be anything other than "IP"?

4   A. Given that I had made the -- made the
5 choice of "IP" as the keyword indicating Internet
6 protocol-related stuff, I would have felt
7 constrained to use that as the leading keyword.
8 Otherwise, it would be a seemingly asymmetric
9 construction in the hierarchy.

10   Q. How long did it take you to come up with
11 the ""ip access-group"" command syntax?

12   A. Not very long. All I needed was some sort
13 of keyword that had "access" in it and something
14 after it to distinguish it between class and list.
15 And as I said earlier, that was the best I could
16 come up with that day. I wasn't necessarily
17 terribly happy about it. It was not a terribly
18 descriptive command, as far as I was concerned.

19   Q. When you say "not very long," are you
20 talking about a matter of minutes?

21   A. Yep.

22   Q. How long -- did you write the source code
23 for the "ip access-group" command?

24   A. For the original, yes.

25   Q. How long did it take you to write the

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33 (Pages 315 - 318)

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1 source code for the original "ip access-group"
2 command?
3   A. So writing it for that command would have
4 been part of writing the entire functionality of
5 putting access lists onto interfaces, I guess on the
6 order of a day.
7   Q. If you turn to page 20 on Exhibit 464.
8 Let me know when you're there.
9   A. Okay. I'm on page 20.
10   Q. The second to the top command is
11 "mac-address."
12   Do you see that?
13   A. Uh-huh.
14   Q. Are you the originator of the
15 "mac-address" command?
16   A. Yes.
17   Q. How do you know that you're the originator
18 of the "mac-address" command?
19   A. I remember the problem that I was solving
20 that I needed that sort of functionality.
21   Q. What was the problem that you were trying
22 to solve by the "mac-address" command?
23   A. I needed to send packets on a serial line
24 that actually -- which a serial line does not have
25 MAC addresses, but I needed to somehow get a MAC

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1   But to your knowledge, MAC is an
2 industry-standard term defined either on OSI or the
3 IEEE?
4   MR. NEUKOM: Objection. Vague. Calls for
5 opinion.
6 BY MR. WONG:
7   Q. Correct?
8   A. I believe at least IEEE has used the term
9 "MAC address."
10   Q. And at the time that you added the
11 "mac-address" command to Cisco IOS, had the IEEE, to
12 your knowledge, already started using the term "MAC
13 address"?
14   A. Yes.
15   Q. How long did it take you -- strike that.
16   How long did it take you to come up with
17 the syntax for the "mac-address" command?
18   A. I don't remember how long. I suspect it
19 was less than a day.
20   Q. Why do you say that?
21   A. I tend to make decisions quickly.
22   Q. How long did it take you to write the
23 source code for the functionality associated with
24 the "mac-address" command?
25   A. It was probably the same day.

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1 address associated with that particular serial line.
2   Q. Was that related to a client request?
3   A. Yes. I don't remember the exact customer
4 or the details to it.
5   Q. Do you remember if the customer suggested
6 you calling the command "mac-address"?
7   A. I don't remember if the customer suggested
8 anything in that particular -- in that particular
9 instance.
10   Q. And is the function of the "mac-address"
11 command to associate a MAC address with a particular
12 serial line?
13   A. It could be a serial line. It could be
14 actually any interface. It would depend what
15 protocols are running across the interface as to
16 what it would do.
17   Q. And what is -- strike that.
18   The MAC part of the words "mac-address,"
19 that refers to media access control, correct?
20   A. Yes.
21   Q. And we talked about that media access
22 control being a layer defined by OSI, correct?
23   A. I think we were wondering whether it was
24 OSI or IEEE.
25   Q. Thank you.

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1   Q. Did you ever consider a command syntax
2 without the hyphen between "mac" and "address"?
3   A. Stylistically, I prefer dashes as opposed
4 to cramming the words together. I like commands
5 that have an English-like flavor to them. And I
6 detest periods in commands and underscores. So this
7 was . . .
8   Q. Did you ever consider two -- let me strike
9 that.
10   Do you know what a token is in the context
11 of a command?
12   A. Yes.
13   Q. Did you ever consider a command syntax of
14 "mac address"?
15   A. I don't recall if I did.
16   Q. What impact would it have, if any, on the
17 user if -- strike that.
18   Would the CLI behave differently if the
19 command was "mac address," as opposed to
20 "mac-address"?
21   MR. NEUKOM: Objection. Hypothetical
22 question.
23   THE WITNESS: Well, it behaves differently
24 in that instead of one token, there's two tokens.
25 So there would be that.

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34 (Pages 319 - 322)

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1 but for different protocols, then it was a very easy
2 generalization.
3   Q. So a matter of minutes?
4   A. Once the decision had been made to do
5 that, yes.
6   Q. What do you think is creative about the
7 command "show ip route"?
8   MR. NEUKOM: Objection. Calls for opinion
9 and legal conclusion.
10   THE WITNESS: So for the "route" command,
11 I originally needed some way of saying -- what I
12 needed was a way of indicating to the software that
13 if I had a packet destined for a particular network,
14 which is the first argument, that I send it to a
15 particular IP address, which is the IP address of a
16 router. And one of those list of network and router
17 pairs may actually be the default, if I didn't find
18 a network mentioned anywhere and couldn't figure out
19 what to do with it. Otherwise, send it to this
20 particular router or gateway. Those are the pieces
21 of information that I needed, and I just -- I chose
22 the name "route." And "IP route" came along
23 afterwards.
24 BY MR. WONG:
25   Q. Are you the originator of the "show

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1 spanning-tree" command?
2   A. Yes, I am.
3   Q. What is a spanning tree?
4   A. My testimony earlier in the day addresses
5 that question.
6   Q. So thank you.
7   And your explanation of what is a spanning
8 tree earlier in today's deposition would be the same
9 for my question regarding the "show spanning-tree"
10 command; is that correct?
11   A. Right.
12   Q. And what functionality does the "show
13 spanning-tree" command perform?
14   A. It displayed global parameters having to
15 do with the spanning tree and interface-specific
16 parameters having to do with the spanning tree on
17 the box.
18   Q. And the term "spanning tree," you didn't
19 come up with that, right, Mr. Lougheed?
20   A. No, I didn't.
21   Q. The term "spanning tree" is used in
22 ANSI/IEEE standards, correct?
23   A. Yes. To my knowledge.
24   (Exhibit 467 marked for identification.)
25 ////

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1 BY MR. WONG:
2   Q. The court reporter has marked Exhibit 467,
3 a document bearing control numbers
4 ARISTANDCA00032440 to 32812.
5   And my only question for you,
6 Mr. Lougheed, on this document marked as Exhibit 467
7 is, is this one of the ANSI/IEEE standards that
8 defines a spanning tree?
9   MR. NEUKOM: Objection. Vague. Also
10 calls for opinion testimony. And to the extent that
11 you can find a way to answer this question insofar
12 as the task is an assessment of a document which is
13 double-sided, still over an inch thick, and appears
14 to have --
15   THE WITNESS: 10-point font.
16   MR. NEUKOM: And appears to have about 350
17 pages. And that's right, size 6 font, size 8 font.
18 It's an unreasonable question on its face.
19 BY MR. WONG:
20   Q. Let me ask it this way, Mr. Lougheed.
21   At the top of page 467, top right, you see
22 it says "1998 edition," right?
23   A. Yes.
24   Q. Have you seen IEEE/ANSI standards before?
25   A. Yes.

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1   Q. From the first page of Exhibit 467, do you
2 have any reason to doubt that this is an IEEE
3 standard?
4   MR. NEUKOM: Objection. Vague. Calls for
5 opinion testimony. And lack of foundation.
6   THE WITNESS: I'm willing to accept the
7 assertion that it's an IEEE standard.
8 BY MR. WONG:
9   Q. Had you ever reviewed the ANSI/IEEE
10 standard 802.1D 1998 edition?
11   A. I have never reviewed the 1998 edition of
12 IEEE 802.1D.
13   Q. Have you ever reviewed any other editions
14 of 802.1D?
15   A. A much earlier version.
16   Q. In that much earlier -- you can set that
17 down, Mr. Lougheed.
18   In that earlier version of 802.1D, do you
19 recall whether the standard used the term "spanning
20 tree"?
21   MR. NEUKOM: Objection. Vague. I'm
22 pretty sure if that document uses the word
23 "standard" the way the document before uses the word
24 "standard," the document presupposes a
25 mischaracterization of the document.

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37 (Pages 331 - 334)

BY MR. WONG:
2 Q. Please answer.
3 A. What's your question again?
4 Q. Sure. In the earlier version of the
5 802.1D standard that you have reviewed -- strike
6 that.
7   You just testified that you had reviewed
8 an earlier version of the 802.1D standard earlier
9 than the 1998 edition, right?
10 A. Right.
11 Q. And do you recall approximately what year
12 that version of the 802.1D standard was?
13 A. Not the year. The year I would have
14 reviewed something like that would have been '87 or
15 '88.
16 Q. And in your review of that version of the
17 802.1D standard that you would have reviewed in 1987
18 or '88, do you recall whether the word "spanning
19 tree" existed in that document?
20 A. No, I don't recall if that word appeared
21 there.
22 Q. But when you came up with the "show
23 spanning-tree" command for Cisco IOS, had you heard
24 of the term "spanning tree" before that?
25 A. Yes, I had.

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1 Q. And why did you choose to put a hyphen
2 between the words "spanning" and "tree"?
3 A. Because I like English phrases and I like
4 separating them with dashes.
5 Q. Why did you --
6 A. And I saw -- go ahead.
7 Q. No, no. I interrupted you, Mr. Lougheed.
8 Go ahead.
9 A. And I had no concept or no belief at the
10 time that I would need to turn that into a
11 hierarchy.
12 Q. And when you say -- refer to a need to
13 turn it into a hierarchy, are you referring to the
14 option of using a space instead of a hyphen in
15 between the word "spanning" and "tree"?
16 A. Yes.
17 Q. How long did it take for you to come up
18 with the command "show spanning-tree," the syntax?
19 A. The syntax? Once I had the protocol
20 working, wouldn't have been very long.
21 Q. Matter of minutes?
22 A. Less than a day.
23 Q. Do you think the command "show
24 spanning-tree" is creative?
25 A. I don't understand.

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1   MR. NEUKOM: Objection. Calls for opinion
2 testimony.
3   THE WITNESS: I don't understand what you
4 mean by the word "creative."
5 BY MR. WONG:
6 Q. Do you believe that it took any degree of
7 creativity to come up with the command "show
8 spanning-tree"?
9   MR. NEUKOM: Same objection. Calls for
10 opinion testimony. Also calls for a legal
11 conclusion.
12   But notwithstanding my objections, you
13 should still try to answer these questions to the
14 best of your ability.
15   THE WITNESS: And the question is?
16 BY MR. WONG:
17 Q. Do you believe that it took any creativity
18 to come up with the command "show spanning-tree"?
19 A. I do believe that it shows a degree of
20 creativity.
21 Q. And describe -- go ahead.
22 A. I mean --
23 Q. Were you done with your answer?
24 A. Yes.
25 Q. And what is creative about the command

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1 "show spanning-tree"?
2   MR. NEUKOM: Objection. Calls for a legal
3 conclusion and calls for opinion testimony.
4   THE WITNESS: And I just -- I'm not sure
5 what the hell you mean by "creative."
6 BY MR. WONG:
7 Q. Have you -- do you know what the word
8 "creative" means?
9   What do you understand the word "creative"
10 to mean? The question is, what do you understand
11 the word "creative" to mean?
12   MR. NEUKOM: Objection to form.
13   THE WITNESS: It's the ability to create
14 things. And I was creating a command expression to
15 monitor a piece of complex software.
16   What do you mean by "creative"?
17 BY MR. WONG:
18 Q. I'm going to use your definition of
19 creative here, Mr. Lougheed. Under your definition
20 of "creative," what's creative about the "show
21 spanning-tree" command?
22   MR. NEUKOM: Objection. Calls for opinion
23 testimony and calls for a legal conclusion.
24   THE WITNESS: Writing any piece of
25 software involves some degree of creativity. It may

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38 (Pages 335 - 338)

1   Q. And actually, if you look on that same
2 page, page 42 of Exhibit 464, the command right
3 above it is "timers basic (RIP)."
4   Do you see that?
5   A. Uh-huh.
6   Q. And you are also the originator of that
7 command, correct?
8   A. Yes.
9   Q. And the date of earliest known document
10 for that command is September 14th, 1989.
11   Do you see that?
12   A. Uh-huh.
13   Q. Is that -- strike that.
14   Did you work on different "timers"
15 commands at the -- roughly the same time period for
16 Cisco IOS?
17   MR. NEUKOM: Objection. Vague and
18 compound.
19 BY MR. WONG:
20   Q. Let me ask specifically, actually, about
21 these.
22   Did you work on the "timers basic" command
23 and the "timers bgp" command at the same time?
24   A. I don't know if it was the same time, but
25 it was certainly in the late '80s.

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1   Q. Do you have to --
2   A. It's either "routing-protocol" or
3 "router." The command form changed in that time
4 frame. But it's the same -- it's the same concept.
5   Q. So just so I understand, Mr. Lougheed,
6 before a user at the command-line interface types in
7 "timers bgp" as a command, before that, the user has
8 to type in a routing protocol command?
9   A. Right. For example, "router bgp,"
10 "timers" plus the number, and then you would say,
11 you know, "bgp timers" or timers bgp."
12   Q. Got it.
13   And BGP refers to border gateway protocol,
14 correct?
15   A. Yes.
16   Q. And we discussed border gateway protocol
17 during your first deposition. Remember that?
18   A. That correct.
19   Q. And as the 1989, BGP was already in IETF
20 industry standards, correct?
21   A. No.
22   Q. At what stage was -- strike that.
23   Today BGP is specified in IETF industry
24 standards, correct?
25   A. It is described in an RFC that is a

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1   Q. Were there already commands in Cisco IOS
2 at the time you added the "timers bgp" command where
3 the first token was the word "timers"?
4   A. Yes.
5   Q. What existing commands were present in
6 Cisco IOS that started with the first token of
7 "timers" when you added the "timers bgp" command?
8   A. They were all -- they were all subcommands
9 of the "routing" protocol command. They were --
10 that was the only -- the only domain that was -- the
11 "timers" command at that time was for routing --
12 adjusting timers for routing protocols.
13   Q. And just so I can understand, when you say
14 they were all subcommands of the "routing-protocol"
15 command, what is the "routing-protocol" command?
16   A. These days, it would be the "router"
17 command. And the "router" command -- it's a command
18 mode where you say "router," then the name on the
19 routing protocol, like "IGRP" or "RIP" or "BGP."
20 And then you would -- on subsequent lines, you would
21 give command expressions that would tweak stuff that
22 is specific to that particular protocol.
23   Q. So was the "timers bgp" command a
24 subcommand of the "routing-protocol" command?
25   A. Yes.

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1 standard -- what the IETF calls a standard, yes.
2   Q. So as of the time that the timers BGP
3 proto- -- strike that.
4   At the time that the timers BGP command
5 was added to Cisco IOS, at what stage was the BGP
6 standardization process in the IETF, to your
7 knowledge.
8   A. Yakov Rekhter and I came up with the very
9 first version of BGP in January of 1989, wrote an
10 RFC describing it. And there were other
11 implementations that were starting to pop up after
12 we did the first couple of RFCs. I don't
13 remember -- Yakov Rekhter was the person who handled
14 the standards process within the IETF.
15   Q. Do you remember the RFC number of the
16 first BGP RFC?
17   A. I believe it was 1105.

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40 (Pages 343 - 346)

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45 (Pages 363 - 366)

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46 (Pages 367 - 370)

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19   MR. NEUKOM: We've, again, been going for
20   over an hour. So let's take a break, please.
21   THE VIDEOGRAPHER: Going off the record.
22   The time is 3:52 p.m.
23   (A recess was taken.)
24   THE VIDEOGRAPHER: Back on the record.
25   The time is 4:01 p.m.

47 (Pages 371 - 374)

1   A.   Correct.

[text redacted]

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1   hierarchy of commands that are used in that command
2   mode.
3   Q.   Okay. Well, my question is, did you
4   create the "user exec" command mode in Cisco IOS?
5   MR. NEUKOM: Objection. Asked and
6   answered.
7   THE WITNESS: I'm sorry. The question
8   again is?
9   BY MR. WONG:
10   Q.   Did you create the "user exec" command
11   mode in Cisco IOS?
12   MR. NEUKOM: Objection. Asked and
13   answered.
14   THE WITNESS: I was the person responsible
15   for the look and feel of the "exec" command mode.
16   BY MR. WONG:
17   Q.   But when you say "exec" command mode, is
18   that the same thing as the "user exec" command mode?
19   A.   Yes. I think we're talking about the same
20   thing.
21   Q.   I think we are too.
22   Is there a "privilege exec" command mode
23   in Cisco IOS?
24   A.   Yes.
25   Q.   And what is the difference between the

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1   BY MR. WONG:
2   Q.   You can set that aside.
3   Mr. Lougheed, after your first deposition,
4   Cisco identified you a few days later as the creator
5   of the command modes and prompts at issue in this
6   litigation. Are you aware of that?
7   A.   Yes.
8   Q.   Are you the creator of the command modes
9   and prompts at issue in this litigation?
10   MR. NEUKOM: Objection. Compound.
11   BY MR. WONG:
12   Q.   Let me go one by one then, Mr. Lougheed.
13   A.   Okay.
14   Q.   Are you familiar with the "user exec"
15   command mode?
16   A.   In what piece of software?
17   Q.   Cisco IOS.
18   A.   Yes.
19   Q.   And what is the "user exec" command mode
20   in Cisco IOS?
21   A.   It's the set of interactive commands for
22   maintaining and monitoring the software.
23   Q.   And did you create the "user exec" command
24   mode in Cisco IOS?
25   A.   I created many of the commands and the

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1   "privilege exec" command mode in Cisco IOS and the
2   "user exec" command mode in Cisco IOS?
3   A.   The one is a subset of the other.
4   Q.   Which one is a subset of the other?
5   A.   The "user" command mode.
6   Q.   And are you the creator of the "privilege
7   exec" command mode in Cisco IOS?
8   A.   I base that ultimately on Mr. Yaeger's
9   work.
10   Q.   Is that the end of your answer?
11   A.   Yes.
12   Q.   I just wanted to make sure that you
13   weren't going to say something else.
14   A.   Okay.
15   Q.   Is there a "global configuration" command
16   mode in Cisco IOS?
17   A.   Yes.
18   Q.   What is the "global configuration" command
19   mode in Cisco IOS?
20   A.   It's a set of configuration commands that
21   apply to the entire box.
22   Q.   And did you create the "global
23   configuration" command mode in Cisco IOS?
24   A.   Yes.
25   Q.   When did you create the "global

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1 configuration" command mode in Cisco IOS?
2   A. In the 1985, 1986 time frame.
3   Q. And why do you say the 1985, 1986 time
4 frame?
5   A. Because that's -- I don't have any further
6 precision.
7   Q. Let's mark this as the next exhibit. I'm
8 sorry. What number are we on?
9   THE REPORTER: 476.
10   (Exhibit 476 marked for identification.)
11 BY MR. WONG:
12   Q. The court reporter has marked Exhibit 476
13 a document bearing control numbers CSI-CLI-00358622
14 to 358654.
15   Mr. Lougheed, before I ask you about this
16 document, this is a document that Cisco has
17 identified to Arista as the first documentation of
18 the command modes and prompts at issue in this case.
19 So you know, whether that's true or not, I don't
20 know, but I'm just representing to you that that is
21 what Cisco has represented to us in discovery.
22   Can you please take a look at Exhibit 476
23 and let me know if you recognize Exhibit 476.
24   A. Yes, I recognize it.
25   Q. And what is Exhibit 476?

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1   A. It's the first -- it's the first user
2 manual for the Cisco software.
3   Q. Okay. And was the user manual in --
4 strike that.
5   So this -- Exhibit 476 says "Version 5.2,"
6 correct?
7   A. Correct.
8   Q. Was that the first version of Cisco's
9 ASM/AGS software that was sold to the public?
10   A. Yes.
11   Q. And was the user manual and configuration
12 guide for the Cisco Systems ASM/AGS marked here as
13 Exhibit 476 provided to customers of Cisco?
14   MR. NEUKOM: Objection. Lack of
15 foundation.
16   THE WITNESS: We shipped a copy with each
17 of the earlier units.
18 BY MR. WONG:
19   Q. And you know that from personal knowledge?
20   A. Yes.
21   Q. Do you agree, Mr. Lougheed, that the
22 command modes that we have been discussing today are
23 documented in Exhibit 476?
24   MR. NEUKOM: Objection. The document
25 speaks for itself. And objection, compound.

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1 BY MR. WONG:
2   Q. I'll go one by one then.
3   Mr. Lougheed, do you --
4   MR. NEUKOM: Why? I don't mean to be a
5 pain, but it's 4:20 in the afternoon. This witness
6 is on his second day of deposition. If it's in
7 there, you can show it at trial. If it is or it
8 isn't, we're keeping Mr. Lougheed here so that you
9 can walk him through to have him admit the contents
10 of a document or not.
11   MR. WONG: Okay.
12   MR. NEUKOM: It just seems a little bit of
13 a pain for this witness who is being very
14 cooperative.
15   MR. WONG: Let's move on to the "interface
16 configuration" command mode.
17 BY MR. WONG:
18   Q. Mr. Lougheed, do you know what the
19 "interface configuration" command mode is?
20   A. Yes.
21   Q. What is the "interface configuration"
22 command mode?
23   A. It is a -- it's a mode entered by the --
24 starts out with the command interface, specifies the
25 name of the interface, and then on subsequent lines

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1 there are subcommands that refer to the -- there are
2 subsequent configuration commands that use that
3 first interface as a reference to what -- what
4 interface is actually being configured.
5   Q. And we're talking about the "interface
6 configuration" command mode in Cisco IOS?
7   A. In the current Cisco IOS, yes.
8   Q. And are you the creator of the "interface
9 configuration" command mode in Cisco IOS?
10   A. Yes.
11   Q. And when was that created?
12   A. After I left Stanford.
13   Q. Do you know approximately when in terms of
14 the year that you created the "interface
15 configuration" command mode?
16   A. '86, early '87.
17   Q. What's the command prompt for the
18 "interface configuration" command mode in Cisco IOS?
19   A. I don't remember what the modern one is.
20 There was none in the early versions.
21   Q. And what was the command prompt for the
22 "exec" or "user exec" command mode for Cisco IOS?
23   A. The name of the host. If it didn't -- if
24 there was -- either gateway angle bracket, which was
25 the default, or if it could figure out its host

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1 name, it would have the host name and an angle
2 bracket.
3   Q. And was the angle bracket also the prompt
4 used -- strike that.
5   Was the angle bracket also a prompt used
6 in the EE-CF software at Stanford?
7   A. Yes.
8   Q. Do you know if the angle bracket was used
9 in the SUMEX software at Stanford?
10   A. I don't recall.
11   Q. If you open up Exhibit 36, Mr. Lougheed.
12   A. Okay. 36?
13   Q. Yes, Exhibit 36. It's a manual. It's the
14 manual we were just looking at. Or actually not.
15 It's a different manual.
16   A. No. It documents -- no. They're
17 different manuals.
18   Q. Yes. I'm sorry. If you have Exhibit 36,
19 that's fine.
20   A. Yes, I've got it.
21   Q. But I meant Exhibit 476. I'm confusing
22 myself now.
23   A. Okay.
24   Q. If you turn to page 2 of Exhibit 476. Let
25 me know when you're there.

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1   A. Yes.
2   Q. Now, the next line says, "Sierra is the
3 name of the time-sharing computer."
4   Do you see that?
5   A. Yes.
6   Q. That Sierra is referring to the same
7 Sierra that's used at Stanford, correct?
8   A. In this context, Sierra is referring to a
9 generic time-sharing computer.
10   Q. Can you open up Exhibit 36, please,
11 Mr. Lougheed? And you can stay on that page of
12 Exhibit 476. But if you open up Exhibit 36 to
13 page 2. And the control number at the bottom is
14 CSI-CLI-01315527. Let me know when you're there.
15   A. I'm there.
16   Q. Under section 2-1, "Basic Ethertip Use,"
17 do you see where I'm looking?
18   A. Uh-huh.
19   Q. It says, "To get the attention of the
20 EtherTIP's command processor, you must press the
21 return key. A message may be printed out, followed
22 by the EtherTIP's name. The EtherTIP is then ready
23 to accept commands. See Figure 2-1. Words in
24 boldface are typed by the user; normal type is
25 printed by the EtherTIP; and italics are comments."

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1   A. Page 2 as in the documents, internal
2 documents?
3   Q. Yes. I'm sorry. And the control number at
4 the bottom of page 2 of Exhibit 476 is CSI-CLI
5 00358625. Are you there?
6   A. I'm there.
7   Q. Do you see a section called "2.1 Basic ASM
8 Use"?
9   A. Yes, I see that section.
10   Q. And the first sentence there says, "To get
11 the attention of the ASM's command processor, you
12 must press the return key."
13   Did I read that correctly?
14   A. Yes.
15   Q. The next sentence says, "A message must be
16 printed out, followed by the ASM's host name."
17   Did I read that correctly?
18   MR. NEUKOM: We'll stipulate to that.
19 BY MR. WONG:
20   Q. And the rest of the paragraph reads, "The
21 ASM is then ready to accept commands. See Figure
22 2-1. Words in boldface are typed by the user;
23 normal type is printed by the ASM; and italics are
24 comments."
25   Did I read that correctly?

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1   Do you see that?
2   A. Yes.
3   Q. Now, that sounds like the same text that's
4 in section 2.1 of the Cisco Systems ASM/AGS User
5 Manual and Configuration Guide marked as
6 Exhibit 476. Is that right?
7   MR. NEUKOM: Objection. Mischaracterizes
8 the document.
9   THE WITNESS: Ask the question again. I'm
10 sorry.
11 BY MR. WONG:
12   Q. The text that appears in the first
13 paragraph under section 2.1 of the Stanford EtherTIP
14 User Guide marked as Exhibit 36 is substantially the
15 same as the text that appears under section 2.1 of
16 the Cisco Systems ASM/AGS User Manual marked as
17 Exhibit 476; isn't that right?
18   MR. NEUKOM: Objection. Documents speak
19 for themselves.
20   THE WITNESS: I agree with your
21 observation.
22 BY MR. WONG:
23   Q. You agree with whose observation?
24   A. I was trying to answer your question.
25   Q. Oh. Thank you, Mr. Lougheed.

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1   The same page, you see Figure 2-1:
2 "Example EtherTIP Session" in Exhibit 36, correct?
3   A. Uh-huh.
4   Q. The first sentence underneath that says --
5 and I'm looking at Exhibit 36. On page 2 of the
6 document, it says, "After you have a prompt, the
7 most common action is to type in the name of the
8 host to which you wish to connect and press the
9 return key." Right?
10   A. Yeah.
11   Q. If you look under Figure 2-1 in the Cisco
12 Systems ASM/AGS User Manual, which is Exhibit 476 on
13 page 2, it says, "After you have a prompt, the most
14 common action is to type in the name of the host to
15 which you wish to connect and press the return key."
16   Do you see that?
17   A. Uh-huh.
18   Q. Now, that's the exact same sentence,
19 correct?
20   A. Correct.
21   Q. Why did Cisco copy from the Stanford
22 EtherTIP User Guide marked as Exhibit 36 to create
23 its ASM/AGS User Manual marked as Exhibit 476?
24   A. I didn't have the time to go and change
25 all the documentation that I had written at

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1 Stanford.
2   Q. Are there other similarities between the
3 two documents that you're aware of, Mr. Lougheed?
4   Let me ask it a different way.
5   How much of the Stanford EtherTIP/Gateway
6 User and Configuration Guide marked as Exhibit 36
7 did Cisco copy to create the Cisco Systems ASM/AGS
8 User Manual and Configuration Guide marked as
9 Exhibit 476?
10   MR. NEUKOM: Objection. Lack of
11 foundation.
12   THE WITNESS: I was the author of both
13 documents. I don't remember in quantifiable detail
14 how much I retained and how much I added. I'm sure
15 both documents could be compared.
16 BY MR. WONG:
17   Q. And would you agree, Mr. Lougheed, that if
18 two sentences are exactly the same in Exhibit 36,
19 which is the Stanford guide, and Exhibit 476, which
20 is the Cisco User Manual, that those sentences were
21 copied by Cisco from the Stanford EtherTIP User
22 Guide?
23   MR. NEUKOM: Objection. Vague.
24 Speculative and hypothetical. Also calls for
25 opinion testimony.

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1   THE WITNESS: Would you repeat the
2 question.
3 BY MR. WONG:
4   Q. Would you agree, Mr. Lougheed, that two
5 sentences are exactly the same in Exhibit 36, which
6 is the Stanford User Guide and Exhibit 476, which is
7 the Cisco User Manual, that those sentences were
8 copied by Cisco directly from the Stanford EtherTIP
9 User Guide?
10   MR. NEUKOM: Objection. Vague. Compound.
11 Calls for a legal conclusion. Calls for speculation
12 and opinion.
13   THE WITNESS: Given that I'm the author of
14 both documents, it's not surprising that I would
15 reuse my words in these two documents.
16 BY MR. WONG:
17   Q. And just so I have one example,
18 Mr. Lougheed, just to address counsel's objection,
19 in Exhibit 36, on the page with the control number
20 at the bottom of 1315527, the second paragraph from
21 the bottom. Are you there? It starts --
22   A. "You may have more than one connection."
23   Q. Yes. Can you read that please, that one
24 sentence?
25   I'm sorry. Can you read that aloud,

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1 please, that one sentence starting with "You may
2 have more than one connection."
3   A. This is Stanford stuff, yes.
4   "You may have more than one connection at
5 a time and switch back and forth between them. To
6 do this, get back to the EXEC by typing the escape
7 sequence, usually control up arrow or control arrow
8 followed by X."
9   Q. You can stop there, Mr. Lougheed.
10   Can you now look at Exhibit 476? And
11 Exhibit 476 is the Cisco Systems ASM/AGS User Manual
12 and Configuration Guide, Version 5.2, correct?
13   A. Yes.
14   Q. And this was provided to Cisco customers
15 when they purchased Cisco products, correct?
16   A. Yes.
17   Q. Can you please read the first two
18 sentences in the last paragraph shown on the page
19 ending in Bates Nos. 358625?
20   A. "You may have" -- "You may have more than
21 one connection at a time and switch between -- and
22 switch back and forth between them. To do this, get
23 back to the EXEC by typing the escape sequence,
24 usually control up arrow followed by X. See the" --
25   Q. And that's the -- that's fine right there,

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1 Mr. Lougheed.
2   Now, those two sentences that you read
3 from the Stanford Ethertip User Guide marked as
4 Exhibit 36 and the Cisco Systems ASM/AGS User Manual
5 marked as Exhibit 476 are exactly the same, correct?
6   A. Yes. I wrote both sentences.
7   Q. And so Cisco copied those two sentences
8 from the Stanford guide marked as Exhibit 36 and put
9 them into the Cisco guide marked as Exhibit 476,
10 correct?
11   MR. NEUKOM: Objection. Asked and
12 answered a couple times now.
13   MR. WONG: I'm asking about those two
14 particular sentences.
15   MR. NEUKOM: Yeah. And before you asked a
16 blanket question and you didn't like his answer,
17 which I thought was a pretty darn good one. So you
18 decided to just keep him in the room --
19   MR. WONG: Counsel.
20   MR. NEUKOM: Look, you responded to my
21 objection. You wanted to engage me. So I'll
22 explain my objection. If you don't want me piping
23 up, that's fine. Just let me make objections for
24 the record.
25   Now you're asking him the exact same

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1   MR. WONG: I think it's our understanding
2 that all witnesses can have 30 days or something.
3   MR. NEUKOM: By stipulation.
4   MR. WONG: Great.
5   THE VIDEOGRAPHER: This concludes today's
6 videotaped deposition of Mr. Kirk Lougheed. We're
7 off the record at 4:37 p.m.
8   (TIME NOTED: 4:37 P.M.)
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1 question after having had the fourth employee of
2 Cisco, Mr. Lougheed, who is now here at almost 5:00
3 reading aloud from documents. And you asked him the
4 same question again to see if you can get a
5 different answer. So go for it. This is starting
6 to feel increasingly not very respectful of this
7 witness's time.
8 BY MR. WONG:
9   Q. Do you want me to read the question again?
10 I'll read the question again.
11   A. That would be fine.
12   Q. Cisco copied those two sentences that you
13 just read aloud into the record for its user manual
14 marked as Exhibit 476 from the Stanford user manual
15 marked as Exhibit 36, correct?
16   A. I wrote both manuals.
17   MR. WONG: I have no further questions.
18   THE VIDEOGRAPHER: This concludes today's
19 videotaped deposition of Mr. Kirk --
20   MR. NEUKOM: Oh, I'm sorry to interrupt.
21   On behalf of Mr. Lougheed, he reserves the
22 right to review an errata of the transcript. I
23 don't know, Ryan, if we've been doing this by
24 stipulation for all witnesses, even if it's not put
25 on the record.

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1   DECLARATION UNDER PENALTY OF PERJURY
2
3   I, KIRK LOUGHEED, the witness herein,
4 declare under penalty of perjury that I have read the
5 foregoing in its entirety; and that the testimony
6 contained therein, as corrected by me, is a true and
7 accurate transcription of my testimony elicited at said
8 time and place.
9
10 Executed this _____ day of _____ 2016, at
11 _____. _____.
12   (City)   (State)
13
14
15
16
17   _____
18   KIRK LOUGHEED
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 1          REPORTER'S CERTIFICATION
 2      I, Leslie Johnson, a Certified Shorthand
 3  Reporter of the State of California, do hereby certify:
 4      That the foregoing proceedings were taken
 5  before me at the time and place herein set forth; that
 6  any witnesses in the foregoing proceedings, prior to
 7  testifying, were administered an oath; that a record of
 8  the proceedings was made by me using machine shorthand
 9  which was thereafter transcribed under my direction;
10  that the foregoing transcript is a true record of the
11  testimony given.
12      Further, that if the foregoing pertains to
13  the original transcript of a deposition in a Federal
14  Case, before completion of the proceedings, review
15  of the transcript [ ] was [ ] was not requested.
16  I further certify I am neither financially interested in
17  the action nor a relative or employee of any attorney or
18  any party to this action.
19      IN WITNESS WHEREOF, I have this date
20  subscribed my name.
21  Dated: April 19, 2016
22
23      Leslie Johnson
24      LESLIE JOHNSON
25      CSR No. 11451, RPR, CCRR
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